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United States Patent

[19]

Timmers et al.**Patent Number:** 5,527,929**Date of Patent:** Jun. 18, 1996**[54] ZWITTERIONIC BISCYCLOPENTADIENYL COMPLEXES****[75] Inventors:** Francis J. Timmers; David D. Devore, both of Midland, Mich.**[73] Assignee:** The Dow Chemical Company, Midland, Mich.**[21] Appl. No.:** 482,135**[22] Filed:** Jun. 7, 1995**Related U.S. Application Data****[60]** Division of Ser. No. 481,791, Jun. 7, 1995, which is a continuation-in-part of Ser. No. 284,925, Aug. 2, 1994, abandoned.**[51] Int. Cl.⁶** C07F 17/00; C07F 7/00; B01J 31/00**[52] U.S. Cl.** 556/7; 556/11; 556/2; 556/28; 556/53; 502/152; 502/158; 526/134; 526/160; 526/162; 526/348; 526/943**[58] Field of Search** 556/7, 11, 12, 556/28, 53**[56] References Cited****U.S. PATENT DOCUMENTS**

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Primary Examiner—Porfirio Nazario-Gonzales**[57] ABSTRACT**

Zwitterionic biscyclopentadienyl, Group 4 transition metal complexes formed with conjugated dienes useful as catalysts for polymerizing olefins, diolefins and/or acetylenically unsaturated monomers.

3 Claims, No Drawings

Zwitterionisch. biszyklopentadienyl
komplexe sind
durch